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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,627	10/12/2001	Ramesh Radhakrishnan	CISCP717	1647

26541 7590 06/17/2005

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EXAMINER
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SHAH, KAMINI S

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/976,627

Applicant(s)

RADHAKRISHNAN ET AL.

Examiner

Kamini S. Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-16, 18-27 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7-13, 15, 16, 18-24, 26, 27 and 29-36 is/are rejected.
- 7) ☒ Claim(s) 3, 14 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments with respect to claims 1,7,12,18,23,29 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2,4-5,7-13,15-16,18-24,26,27,29-36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al in view of Fijolek (6,577,642).

Regarding to claim invention (claims 1, 7,12,18,23,29), Doshi et al describes in the background of the invention, data transmission system, wherein a transmitter transmits data packets to an intended receiver via a path which may include, *for example, a packet network, in which each packet is associated with a respective sequence number. The receiver transmits to the transmitter control packet containing information identifying those data packets that were received correctly. Such information could be in the form of a bit map, in which the order of the bits corresponds with the order of the sequence numbers of data packets that were received correctly, incorrectly or not at all at the receiver.* Furthermore Doshi et al discloses that upon receipt of the control packet, the transmitter retransmits those numbered packets which receiver identified in the bit map as being received incorrectly or not at all, see col. 1, lines 10-34. However Doshi does not include encapsulating said data packets such that a

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sequence number is appended in a header for each transmitted data packet. Fijolek teaches point-to-point Protocol ("*PPP*") *layer 50 that is used to encapsulate network layer data grams over a serial communications link, and furthermore teaches a upstream and downstream protocol layers in a network layer 54, wherein CMTS 12 at the downstream end of the virtual tunnel receives the packet, strips off the U encapsulating IP 54 header, as claimed "appending sequence number in a header", see col. 8, lines 56-59, 66-68 and col. 10. lines 4-19.*

Therefore, at the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such encapsulating data packet within a point-to-multipoint protocol packet as in teaching of Fijolek with Doshi, so that IP packets, or data grams can be transmitted to a destination via a point-to- multipoint network. The motivation for doing so would have been to provide virtual networking services and service classes for desired end-to-end networking services for using a data-over-cable system (see col.4, lines 1-4). Thus, it would have been obvious to combine teaching of Fijolek and Doshi to come up with the invention as specified in the claim.

Regarding to claim 2, Doshi et al teaches transmitter 100, which includes a generation of sequence numbers, appending such sequence numbers to respective data packets that are to be transmitted to receiver 200 and the retransmission of those data packets which were not received correctly at receiver 200, see col. 3, lines 1-6.

Regarding claim 4, Doshi et al disclose transmitter 100 constitute of the transmitter section of data terminal contained within a packet switch or host computer or

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within an interface unit disposed between the host computer and a network, see col. 2, lines 44-47.

Regarding to claim 7, Doshi teaches a receiver 200 as a claimed second node, for comprising functions such as receiving data packet by checking sequence numbers, forming bitmap information such as generation of sequence numbers to respective data packets that are to be transmitted to receiver and retransmission of those data packets which are not received correctly at receiver, see col. 2, lines 65 through col. 3, lines 1-6.

Regarding claims 8-11, Doshi discloses claimed subject matter in figure 10, including flow chart for administers timer and acknowledge receipt, and data packets associated with sequence number see, col. 9, and lines 15-40.

Regarding claims 12, 13, 15, 16, 23, 24, 26, 29 claims recite similar subject matter as in claims 1-5, and therefore the claims are rejected for the similar reasons.

Regarding to claims 5, 16, and 27, the claimed protocol DOCSIS MAC for transmitting data, is known to those skilled in the art for the communication between host and network with Internet. Additionally, it's a standardize architecture for IP-based services over the cable network, this standard defines a Medium Access Control "MAC" layer for a cable modem to initialize cable modem termination system.

Regarding claims 30-33, Doshi teaches controller 205, a bit map 203 for checking whether data packet are received correctly, see col. 4, lines 15-32.

Regarding claims newly added claims 34, 35, and 36 for including retransmitting until the retry limit is approximately reached, Doshi teaches program that compares the

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value of SEQ\_N with the value of SEQ\_MAX+1, then it precedes to block 402, or otherwise program proceeds to block 405, as in col. 4, lines 63-col. 5, lines 1-8.

***Allowable Subject Matter***

4. Claims 3, 14, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamini S. Shah whose telephone number is 571-272-2279. The examiner can normally be reached on IFP.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal B. Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kamini S Shah  
Primary Examiner  
Art Unit 2142

kss